

disposing a catalyst containing material in contact with a selected region of only the first region of the semiconductor film, said catalyst being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said catalyst through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[.]; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a concentration of said catalyst in said first region is 1×10^{19} atoms/cm³

or lower.

31. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing a catalyst containing material in contact with a selected region of only the first region of the semiconductor film, said catalyst being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said catalyst through the

semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[,] ; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a concentration of said catalyst in said first region is 1×10^{19} atoms/cm³ or lower, and

wherein a concentration of said catalyst in said second region is lower than that in said first region.

33. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a glass substrate having a glass strain point of 593 °C or less, said semiconductor film having a first region and a second region;

disposing a catalyst containing material in contact with a selected region of only the first region of the semiconductor film, said catalyst being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said catalyst through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[,] ; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

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wherein a concentration of said catalyst in said first region is 1×10^{19} atoms/cm³ or lower.

42. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing a catalyst containing material in contact with a selected region of only the first region of the semiconductor film, said catalyst being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said catalyst through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[,] ; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region.

wherein a concentration of said catalyst in said first region is 1×10^{19} atoms/cm³ or lower, and

wherein said first region and said second region each includes hydrogen.

45. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing nickel in contact with a selected region of only the first region of the semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said nickel through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[.]; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region.

wherein a concentration of said nickel in said first region is 1×10^{19} atoms/cm³

or lower.

47. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing nickel in contact with a selected region of only the first region of the semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said nickel through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate[.]; and

patterning said semiconductor film in order to form a first semiconductor island